

CLAIMS

1 1. A method of assembling a head gimbal assembly comprising the following  
2 steps performed in the following order:

3 attaching a head/slider having at least one termination pad to a flex circuit

4 having at least one electrical lead to produce a head/slider circuited  
5 gimbal assembly;

6 electrically connecting the at least one termination pad of the head/slider to

7 the at least one electrical lead of the flex circuit; and

8 attaching the head/slider circuited gimbal assembly to a suspension.

1 2. The method of claim 1 and further including:

2 determining the static angles of the head/slider circuited gimbal assembly

3 after the step of electrically connecting the at least one termination

4 pad of the head/slider to the at least one electrical lead of the flex

5 circuit.

1 3. The method of claim 2 and further including:

2 determining the static angles of the suspension prior to the step of attaching

3 the head/slider circuited gimbal assembly to the suspension.

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1 4. The method of claim 3 and further including performing a dynamic electrical  
2 test on the head/slider circuited gimbal assembly prior to determining the static  
3 suspension angles.

1 5. The method of claim 4 and further including determining the offset between  
2 the head/slider circuited gimbal assembly prior to attaching it to the suspension.

1 6. The method of claim 5 wherein said offset is determined according to the  
2 following formula:  
3

4 
$$X = -(\Theta_{\text{Circuited Gimbal}} * k_{\text{Circuited Gimbal}} + \Theta_{\text{Suspension Flexure}} * k_{\text{Suspension Flexure}}) / F_{\text{Gram}} - X_0$$

5 where

6  $\Theta_{\text{Circuited Gimbal}}$  = static angle of the HSCG assembly;

7  $k_{\text{Circuited Gimbal}}$  = stiffness of the HSCG assembly;

8  $\Theta_{\text{Suspension Flexure}}$  = static angle of the suspension;

9  $k_{\text{Suspension Flexure}}$  = stiffness of the suspension;

- 10  $F_{\text{Gram}}$  = Gram Load; and  
11  $X_0$  = the product of the gram load and the load point shift.

1 7. The method of claim 1 and further including:  
determining the static angles of the suspension prior to the step of attaching  
the head/slider circuited gimbal assembly to the suspension.

1 8. The method of claim 1 and further including performing a dynamic electrical  
2 test on the head/slider circuited gimbal assembly prior to determining the static  
3 suspension angles.

1 9. The method of claim 8 wherein said dynamic electrical test is performed by  
2 flying the head/slider circuited gimbal assembly over a rotating media disk.

1 10. The method of claim 1 and further including determining the offset between  
the head/slider circuited gimbal assembly prior to attaching it to the suspension.

1 11. The method of claim 10 wherein said offset is determined according to the  
2 following formula:

$$X = -(\Theta_{\text{Circuited Gimbal}} * k_{\text{Circuited Gimbal}} + \Theta_{\text{Suspension Flexure}} * k_{\text{Suspension Flexure}}) / F_{\text{Gram}} - X_0$$

where

$\Theta_{\text{Circuited Gimbal}}$  = static angle of the HSCG assembly;

$k_{\text{Circuited Gimbal}}$  = stiffness of the HSCG assembly;

$\Theta_{\text{Suspension Flexure}}$  = static angle of the suspension;

$k_{\text{Suspension Flexure}}$  = stiffness of the suspension;

$F_{\text{Gram}}$  = Gram Load; and

$X_0$  = the product of the gram load and the load point shift.